Title: "Modulation Compression Method For The
Radio Frequency Transmission of High Speed Data"
Serial No. 10/766,556
Attorney Docket No. P031686-0-07UT
Responsive to Office Action Mailed September 6, 2005
Date: September 30, 2005

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (previously amended) A compression method for modulation systems using integer cycle or impulse modulation on a carrier comprising the steps of:

said wavelets being defined by a 360 degree cycle between crossover positions of said carrier waveform;

said crossover positions representing a substantially zero energy level;]

grouping wavelets of the carrier into wavelet groups containing two or more wavelets;

receiving an information stream as a binary data sequence of first and second binary states;

grouping said binary data sequence of first and second binary states into binary groups of two or more first and second binary states;

correlating one of each said wavelets in said wavelet groups with one of each possible binary values of each said binary groups; and,

modulating said carrier in accordance with said binary data sequence by altering the amplitude, frequency, or phase of [the] one of [each] said wavelets in said wavelet groups corresponding to one of each said binary values of said binary groups resulting in a compressed binary modulated carrier.

2. (previously amended) The method of claim 1 wherein:

the modulating of said carrier is carried out by altering the amplitude, frequency, or phase of said wavelets while minimizing sideband distortions of said carrier.

3. (previously canceled)

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4. (original) The method of claim 1 comprising the additional step of:

reducing of harmonics produced from modulating said carrier by filtering said compressed binary modulated carrier.

5. (original) The method of claim 1 comprising the additional step of:

broadcasting said compressed binary modulated carrier.

6. (original) The method of claim 5 wherein:

broadcasting said compressed binary modulated carrier is accomplished using a Time Division Multiple Access system.

7. (original) The method of claim 5 wherein:

broadcasting said compressed binary modulated carrier is accomplished using a Frequency Division Multiple Access system.

8. (currently amended) A method for decompressing compressed binary information that was derived from a binary information stream composed of a binary data sequence of first and second binary states that was integer cycle or impulse_modulated onto a carrier in which the carrier has been modulated in accordance with said binary data sequence by grouping said wavelets into wavelet groups containing two or more wavelets; receiving said information stream as a binary data sequence of first and second binary states; grouping said binary data sequence of first and second binary states into binary groups of two or more first and second binary states; correlating one of each said wavelets in said wavelet group with one of each possible binary values of each said binary groups; and modulating said carrier in accordance with said binary data sequence by altering the amplitude, frequency, or phase of [the] one of [each] said wavelets in said wavelet groups corresponding to one of each said binary values of said binary groups resulting in a compressed binary modulated carrier which was broadcasted comprising the steps of:

receiving said broadcasted compressed binary modulated carrier;

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demodulating and decompressing said compressed binary modulated carrier by detecting the respective amplitude, [or] frequency, or phase of said wavelets to identify said altered wavelets in said wavelet groups and correlating to said binary values of said binary groups ; and,

reconstructing said binary data sequence from said binary values of said binary groups resulting in regeneration of said information stream.

9. (original) The method of claim 8 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Time Division Multiple Access system.

10. (original) The method of claim 8 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Frequency Division Multiple Access system.

11. (currently amended) A compression and decompression_method for modulation systems using integer cycle or impulse modulation on a carrier_comprising the steps of:

grouping wavelets of the carrier_into wavelet groups containing two or more wavelets;

receiving an information stream as a binary data sequence of first and second binary states;

grouping said binary data sequence of first and second binary states into binary groups of two or more first and second binary states;

correlating one of each said wavelets in said wavelet group with one of each possible binary values of each said binary groups; and,

modulating said carrier in accordance with said binary data sequence by altering the amplitude, frequency, or phase of [the] one of [each] said wavelets in said wavelet groups corresponding to one of each said binary values of said binary groups resulting in a compressed binary modulated carrier;

broadcasting said compressed binary modulated carrier;

receiving said compressed binary modulated carrier;

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demodulating and decompressing said compressed binary modulated carrier by detecting the respective amplitude, frequency, or phase of said wavelets to identify said altered wavelets in said wavelet groups and correlating to said binary values of said binary groups ; and,

reconstructing said binary data sequence from said binary values of said binary groups resulting in regeneration of said information stream.

12. (previously amended) The method of claim 11 wherein:

the modulating of carrier is carried out by altering the amplitude, frequency or phase of said wavelets while minimizing sideband distortions of said carrier.

13. (previously cancelled)

14. (original) The method of claim 11 comprising the additional step of:
reducing of harmonics produced by modulating said carrier by filtering said carrier.

15. (original) The method of claim 11 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Time Division Multiple Access system.

16. (original) The method of claim 11 wherein:

broadcasting and receiving said compressed binary modulated carrier is accomplished using a Frequency Division Multiple Access system.